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CATALYTIC BURNER ELEMENT INSIDE A FUEL CELL
WITH STRUCTURED CATALYTIC COATED SURFACES

ABSTRACT OF THE DISCLOSURE

5 A heat-emitting burner element, especially for use in a
reformer unit of a fuel cell system, consists of two at least essentially parallel
and spaced-apart plates and is characterized by the fact that the plates form a
10 reaction gap between them, and as a result of the catalytic combustion of a
fuel gas/oxygen mixture there on a catalytic coating facing the reaction gap
provided on at least one of the plates, generate heat and emit it by radiation,
convection and conduction directly through the coated plates(s) to at least one
neighboring endothermic stage and that at least one of the plates displays
15 structural elements having the catalytic coating and also extending into the
reaction gap, which structural elements extend in the flow direction and
consist, e.g., of fins or bars. A device for introducing diluting air
transversely to the flow direction through the reaction gap is preferably
provided.

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